



# Sanitary Sewer & Recycled Water Standards

NapaSan  
Board of Directors Meeting  
June 23, 2021



# Specifications & Details

- Set requirements for:
  - Development construction
  - Repair/rehabilitation of private systems
  - Modifications to NapaSan facilities by other parties
- Required by NapaSan Code
- Last approved in June 2020



# Modifications

- Clarify document to be consistent with current practices

# 2021 Notable Changes

- Clarify Sewer Abandonment Requirements
- Update CCTV requirements
- Update Residential Sewer Main Design Flows
- Update Recycled Water Meter Detail

# Clarify Sewer Abandonment Requirements

## A. MAIN SEWERS

Main sewer pipe that is required to be abandoned shall be abandoned by one of the following methods:

1. Removing the existing pipe.

2. Filling with slurry.

a. –Slurry shall be a flowable mix containing a minimum of 2 sack cement per cubic yard.

b. –Volume of slurry shall be calculated by the contractor and provided to the Engineer in advance of performing the work.

c. The contractor is responsible for conducting a pre-inspection of the pipe to determine if it's suitable to receive the material.

d. The contractor is required to implement a monitoring plan and shall identify relevant facilities: storm drains, streams, and surface improvements (streets, sidewalks, etc) that need to be monitored for slurry or heave as a result of abandonment procedures.

~~2.~~e. –The sewer main to be abandoned shall be disconnected from the sewer system prior to filling with slurry.



# Update CCTV Requirements

4. After conditions in Section 8.01.1 as outlined above are met, the entire job will be initially televised.
  - a. A DVD or USB Drive will be made and defects requiring correction will be noted.
  - b. Each mainline segment shall have a dedicated video file. The video file shall be named according to NapaSan's standard naming convention: "Manhole 'A##-###' – Manhole 'B##-###' – Street Name".
  - c. Each lateral mpeg/mpg/mp4 file shall be named with the property address then the street name
  - d. Electronic version (.jpg) of still photographs saved on DVDs or USB Drives
    1. Each jpg photograph will be named by street name then property address
  - e. Video file shall include the following information within the footage:
    1. Project Name
    2. Date of survey
    3. Location (Road name & address for laterals)
    4. Manhole number to manhole number (in order of inspection)
    5. Direction of survey (upstream or downstream)
    6. Time of start of survey
    7. Content (pre or post CCTV)
    8. Video footage shall include footage information.
  - f. Video file shall conform with the following requirements:
    1. Lighting and camera quality shall provide a clear, in-focus picture of the inside periphery of the sewers and laterals for all conditions except submergence.
    2. Under ideal conditions the camera lighting shall allow a clear picture up to five pipe diameter lengths away for the entire periphery of the sewer.
    3. The lighting shall provide uniform light free from shadows or hot spots.
    4. The video recorder shall be paused if the camera progress is stopped for a period longer than 30 seconds due to breakdown of equipment, or any purpose other than analyzing conditions of the sewer.
    5. During inspection, the following information shall be electronically generated, automatically updated, and displayed on the CCTV monitors:
      - a. Survey unit location in the sewer line in feet and tenths of feet adjusted zero
      - b. Sewer diameter



# Updated Residential Sewer Main Design Flows

A. THE DESIGN FLOWS WILL BE BASED ON THE FOLLOWING CRITERIA:

1. Average dry-weather design flow for residential uses~~a single family home~~ shall be as follows~~210 gpd/EDU~~;

<u>Categorization</u>	<u>gpd/unit</u>
<u>Multi-family Residential</u>	<u>130</u>
<u>Single Family Residential</u>	<u>150</u>

~~1.~~

2. Peaking Factor: A minimum peaking factor of 2.5 shall be utilized; however, for flows less than 0.45 mgd refer to chart in Figure 10-1 at the end of this section; and



# Update Recycled Water Meter Details

**ALTERNATE MATERIALS MUST BE APPROVED BY THE DISTRICT PRIOR TO USE**

REFER TO TURBO METER MANUFACTURER'S INSTALLATION REQUIREMENTS FOR MINIMUM STRAIGHT LENGTH

2" CORPORATION STOP TAPPED AT 45° ±, ANNA COMPRESSION FITTING

24" MIN CURB VALVE BOX

2" PURPLE P.E. TUBING CONTINUOUS WITH TRACER WIRE. W/ 6" MIN. SAND BEDDING ON ALL SIDES. NO SPLICING ALLOWED

ALL BENDS IN PE PIPE SHALL HAVE A MINIMUM RADIUS AS PER MANUFACTURER'S RECOMMENDATIONS

SEE RW-12 FOR BACKFLOW DEVICE INSTALLATION REQUIREMENTS

6" OF TOPSOIL

**PROFILE**

**DETAIL**  
METER BOX INSTALLATION

Item No. CONSTRUCTION ITEMS - SIZE AND DESCRIPTION

- 2" CORPORATION STOP, ANNA COMPRESSION FITTING FOR PE PIPE
- 2" BRONZE ANGLE BALL METER VALVE WITH LOCKING
- 13 1/2" x 24" METER BOX W/ H20 RATED STEEL LID W/ RECYCLED WATER INSCRIBED, LID EQUIPPED WITH HINGED READING LID.
- BRONZE FLANGE CONNECTION SET FROM METER MANUFACTURER
- REDUCING BUSHING AS REQUIRED FOR 1 1/2" METERS

**NOTES**

- CURB ADJACENT SIDEWALK: INSTALL VALVE AND METER AT CURB AS SHOWN. INSTALL BACKFLOW DEVICE BEHIND SIDEWALK.
- APPROVED BACKFLOW PREVENTION DEVICES WILL BE REQUIRED PER VOLUME III SECTION 7.
- METER BOX AND SERVICE LINE SHALL BE INSTALLED OUTSIDE OF DRIVEWAY, DRIVEWAY APPROACHES, AND OTHER VEHICULAR ACCESS WAYS.
- SERVICE SHALL BE INSTALLED A MINIMUM OF 24" FROM ANY TAP, BELL, FITTING, OR OTHER SERVICE.
- RECYCLED WATER METERS SHALL BE SET PRIOR TO ANY USE OF RECYCLED WATER SERVICE. USE OF JUMPERS, HOSE BIBS, OR OTHER DEVICES SHALL NOT BE PERMITTED.
- METERS SHALL BE PLACED A MINIMUM OF 3' FROM ANY OBSTRUCTION (SIGN POST, MAIL BOX, FENCES, WALLS, ETC.). NO TREES SHALL BE PLANTED WITHIN 10' OR LARGE SHRUBS WITHIN 5' OF THE METER BOX. SEE STANDARDS FOR ADDITIONAL REQUIREMENTS.
- WHEN TWO OR MORE NEW SERVICES ARE INSTALLED CLOSE TOGETHER, PERMANENT ADDRESS TAGS SHALL BE INSTALLED ON EACH METER SETTER SPECIFYING THE ADDRESS IT WILL BE SERVING. ADDRESS TAGS SHALL BE STAMPED METAL OR PLASTIC TAGS, AND SHALL BE INSTALLED PRIOR TO INSTALLATION OF RECYCLED WATER METERS.
- SERVICES SHALL BE SIZED APPROPRIATELY FOR THE INTENDED USE OF THE SERVICE. DISTRICT MAY REQUEST AN ENGINEERED ANALYSIS OF THE SYSTEM (NEW OR EXISTING) TO EVALUATE THE APPROPRIATENESS OF THE RECYCLED WATER SERVICE SIZE. NO UNDERSIZED WATER SERVICES SHALL BE PERMITTED.
- METER SHALL BE PURCHASED THROUGH METER VALVE AND CONTROL WITH SETTING APPROPRIATE FOR THE MST RW AREA (DRIVE-BY READING), A THROUGH THE LID (TL) ANTENNAE SHALL BE INSTALLED CONNECTING TO THE METER'S ENCODER RECEIVER TRANSMITTER (ERT). INCLUDE OPTIONAL SST CABLE ARMOR. AN ISOLATION VALVE SHALL BE INSTALLED DIRECTLY DOWNSTREAM OF THE METER. METER TO INCLUDE STRAINER.
- #10 AWG SOLID COPPER THIN-THIN WIRE TO BE CONNECTED AT ALL SPLICES WITH SILICONE FILLED DIRECT BURIED WIRE NUTS. EXTEND TRACER WIRE TO METER BOX.
- PAINT BOX INTERIOR, EXTERIOR AND EXPOSED PIPING PURPLE (PANTONE 512C).
- NO SPLICING WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP. IF SERVICE RUN EXCEEDS 20 FEET, A SILVER SOLDER COUPLING SHALL BE USED.

**NAPA SANITATION DISTRICT**

	TITLE	DATE: JUN 2021	DRAWING NO.
	2" RECYCLED WATER SERVICE LATERAL FOR 1 1/2" METERS	CHECKED BY: SK	RW-7
		APPROVED BY: AD	
		SCALE: NONE	

**ALTERNATE MATERIALS MUST BE APPROVED BY THE DISTRICT PRIOR TO USE**

3/4" RECORDALL DISC METER (BADGER METER) WITH INTERNAL STRAINER AND EQUIPPED WITH ENCODER

LID MARKED "NSD RECYCLED WATER." COLOR SHALL BE PURPLE

1" CORPORATION STOP TAPPED AT 45° ±, ANNA COMPRESSION FITTING

24" MIN CURB VALVE BOX

1" PURPLE P.E. TUBING CONTINUOUS WITH TRACER WIRE. W/ 6" MIN. SAND BEDDING ON ALL SIDES. NO SPLICING ALLOWED

ALL BENDS IN PE PIPE SHALL HAVE A MINIMUM RADIUS AS PER MANUFACTURER'S RECOMMENDATIONS

SEE RW-12 FOR BACKFLOW DEVICE INSTALLATION REQUIREMENTS

6" OF TOPSOIL

**PROFILE**

**DETAIL**  
METER BOX INSTALLATION

Item No. CONSTRUCTION ITEMS - SIZE AND DESCRIPTION

- 90 COUPLING (1" PE COMPRESSION CONNECTION TO 3/4" FEMALE THREAD)
- 3/4" COPPER METER YORK WITH INTEGRATED ANGLE VALVE WITH LOCKING ON INLET RISER
- 14" x 20" METER BOX W/ H20 RATED STEEL LID W/ RECYCLED WATER INSCRIBED, LID EQUIPPED WITH HINGED READING LID.

**NOTES**

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**NAPA SANITATION DISTRICT**

	TITLE	DATE: JUN 2021	DRAWING NO.
	1" RECYCLED WATER SERVICE LATERAL FOR 3/4" METERS	CHECKED BY: SK	RW-8
		APPROVED BY: AD	
		SCALE: NONE	





# Distribution

- Online at NapaSan website
- Email to distribution list
- Effective date of June 30th, 2021



# Recommendation

- Approve updates to the Sanitary Sewer and Recycled Water Standards